CITY OF REDMOND
RESOLUTION NO. 1420

A RESOLUTION OF THE CITY OF REDMOND, WASHINGTON, ADOPTING A WATER RESOURCES STRATEGIC PLAN

WHEREAS, the City has had a long standing commitment to maintaining and restoring water quality, and ecosystem functions to ensure the health and well-being of people, animals, and plants; and

WHEREAS, the City strives to minimize and eliminate the release of substances into surface water, soil, and groundwater that degrades the quality of these resources; and

WHEREAS, the City endeavors to protect and restore natural systems that underpin watershed health and hydrological integrity; and

WHEREAS, the City attempts to protect and enhance rivers, lakes, and perennial and intermittent streams, including riparian and shoreline habitat, as well as wetlands, to preserve natural hydrologic and ecological functions, protect water quality, reduce public costs, protect and enhance fish and wildlife habitat, prevent environmental degradation, and preserve and enhance recreational resources, and aesthetics; and

WHEREAS, the City strives to protect groundwater as a safe and cost effective drinking water source; and

WHEREAS, the City attempts to minimize flooding and erosion from excessive stormwater runoff; and

WHEREAS, the City has numerous policies and plans intended to protect, restore and enhance water resources; and

WHEREAS, the City recognized that the development of a water resources summary document would aid communication and foster alignment of the strategy to protect water resources; and

WHEREAS, the City brought together a cross functional team to craft a water resources strategic plan document; and

WHEREAS, the City included internal and external stakeholders in the development of the strategic plan; and

WHEREAS, the City Council reviewed and provided comment on the draft plan at two study sessions.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON, HEREBY RESOLVES that the Water Resources Strategic Plan set forth in Exhibit 1 attached hereto and incorporated herein by this reference as if set forth in full is hereby ratified by the City of Redmond.

ADOPTED by the Redmond City Council this 17th day of February, 2015.

CITY OF REDMOND

JOHN MARCHIONE, MAYOR

ATTEST:

MICHELLE M. HART, MMC, CITY CLERK (SEAL)

FILED WITH THE CITY CLERK: February 03, 2015
PASSED BY THE CITY COUNCIL: February 17, 2015
RESOLUTION NO. 1420

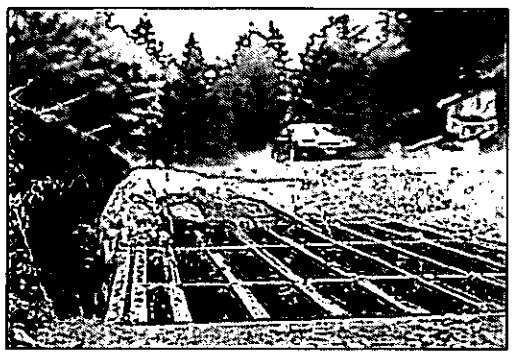
YES: Allen, Carson, Flynn, Margeson, Myers, Shutz, Stilin

City of Redmond
WASHINGTON

February
2015

Water Resources Strategic Plan (2015-2020)

And 3-Year Action Plan (2015-2017)



SURFACE WATER
GROUNDWATER
STORMWATER

INTRODUCTION

Why a Strategic Plan

The purpose of this strategic planning effort has been to better define and communicate the City of Redmond's approach to water resources protection. The plan lays out the mission, goals, objectives, strategies and tactics for water resources efforts in Redmond and how they support the overall City vision and other City functional areas. The plan is a framework for making policy decisions, setting priorities, and most effectively allocating funds. This plan is intended to:

- Demonstrate alignment with Redmond's vision, Comprehensive Plan, Capital Investment Strategy Vision Blueprint, Budgeting by Priorities, and other City efforts
- Identify key strategies and major actions over the next 3 years based on a long-term view
- Become an analysis tool for potential future actions
- Guide other water resources planning efforts
- Communicate how the water resources plan relates to and contributes to Redmond's vision for the future

Process

Under direction from the Mayor and Public Works Director, a cross-departmental team of City staff was convened to contribute to the development of this plan. Staff members were chosen for their knowledge and experience in water resources subject areas and/or for their understanding of other City functions that could potentially be impacted by the outcomes from this plan. A core team facilitated discussions and incorporated comments into the plan. A draft plan was reviewed with City Council in August of 2013 and the Redmond Planning Commission in January of 2014. During the fall and winter of 2013-2014 the plan was reviewed with numerous internal city divisions from Planning, Parks and Public Works. During spring and early summer an external stakeholder group was convened to review the plan and provide input. The final plan was updated based on all the input and will be submitted to City Council for approval.

Community Involvement

To create a foundation for establishing customer based objectives in the plan, staff reviewed the City's public involvement work from previous efforts including the Comprehensive Plan, Transportation Master Plan, Wellhead Protection Program, and Budgeting by Priorities. After development of the initial draft plan and after both City council and planning commission review, an external stakeholders group was convened. Stakeholders represented the following interests: business, engineering/land

development, neighborhoods and environmental. Stakeholders reviewed the plan provided feedback on the plan's clarity and approaches. This effort was focused on higher level concepts and not 'wordsmithing'. The plan was then updated to address the comments.

Water Resources Areas Covered by this Plan

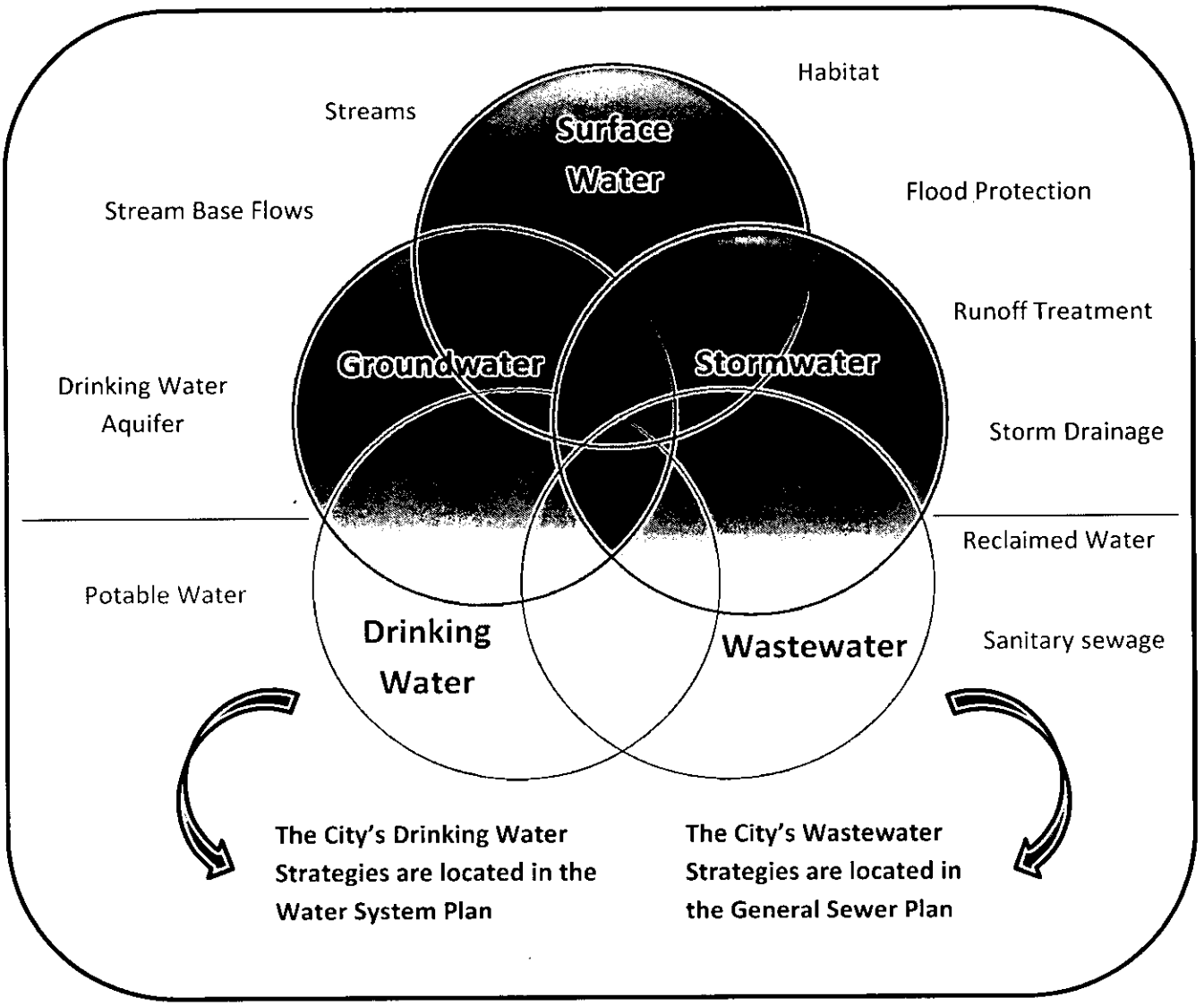
Surface water, groundwater, and stormwater are the water resources areas targeted by this plan. Water resources are major assets of the City of Redmond. Management of these resources is an important responsibility of the City and the City dedicates significant staff and financial resources towards this effort.

The three water resource areas are so interrelated that they were considered together in this strategic plan as opposed to separate plans. Many factors being considered in this plan influence more than one of the water resource areas (surface water, groundwater, and stormwater) looking at these areas together provides a better overall picture.

Other water related areas that are not covered by this plan include the City's Drinking Water Strategies which are located in the City's Water System Plan and Wastewater & Reclaimed Water* Strategies which are located in the General Sewer Plan.

**In the review of this Water Resources Strategic plan, reclaimed water was identified by both the City Council and the stakeholder committee as an area that needed clarity on where strategies should be located. Staff felt that given the close regulatory tie to wastewater, the General Sewer Plan should remain as the primary location for reclaimed water strategies. However, this plan does include a reclaim water tactic (1.9) intended to protect water resources areas covered by this plan. The City of Redmond will continue to work cooperatively with the County to evaluate and implement, if feasible, reclaimed water projects within the City's service area.*

Figure 1. Water Resources Plan Coverage Diagram (Surface Water, Groundwater, and Stormwater)

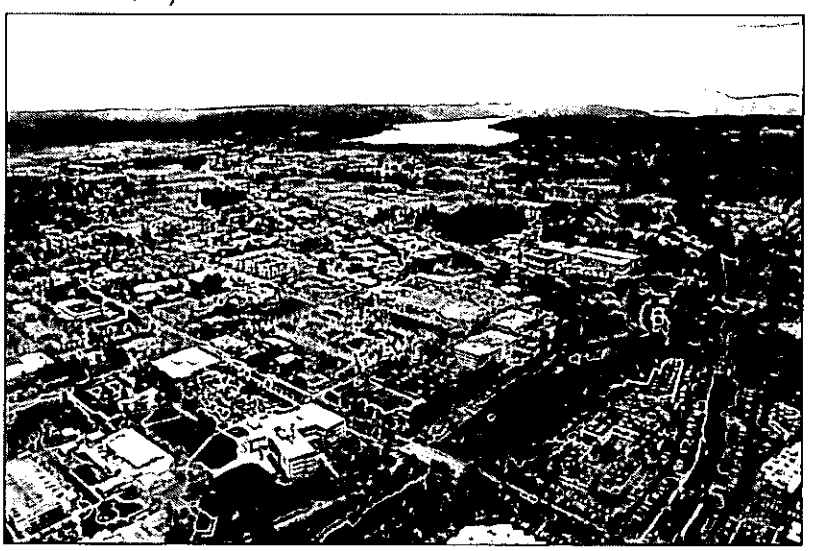


ALIGNMENT WITH CITY GUIDANCE

City Vision

The abbreviated form of the City of Redmond Vision is:

> A community of connected neighborhoods with vibrant urban centers – inspired by nature, powered by innovation and committed to excellence.
>
> (For the complete version of the City 2030 Vision, see Chapter 2 of Redmond's Comprehensive Plan.)



The complete vision has numerous references to the three functional areas relating to natural resources and environmental protection. Additionally, sustainability was the central theme of the latest (2010-2011) Comprehensive Plan update. General examples include:

- Surface waters and associated buffers are identified as "cherished natural features"
- Redmond is described as "urban place within a rich natural environment"
- Residential areas described as "housing blended with the environment"
- Overall, Redmond is characterized as "City framed within a beautiful natural setting"
- Community described as "City prides itself for its environmental stewardship"

Specifically, the vision has numerous references to the community's desire for clean drinking water (groundwater), stormwater systems that reduce excess runoff, increasing salmon runs, controlling contaminates, enhanced habitat and improved water quality.

Key guiding messages from the City vision include:

Balance – The City vision for the future is a vibrant urban community that has accommodated growth and preserved the environment. A rich natural environment is truly valued by the community and is a defining characteristic of Redmond.

Enhancement – The City vision looks to go beyond mitigating impacts of growth and improve the natural environment, streams and buffers, salmon runs, groundwater quality and quantity, surface water quality, etc. as the City grows.

Planned well – The vision states that the City is very intentional in its efforts to protect and enhance the environment. Use of creative design, public-private partnerships, inventorying and monitoring of natural features, innovative land use development, utility planning and other techniques that are well thought out to protect, conserve and enhance the natural environment.

Maintained well – Long-term maintenance is anticipated, planned for and funded appropriately. Designing and upgrading systems prevent damage to the environment and provide for cost effective maintenance. Additionally, as the City performs maintenance, we foster conservation operationally.

In addition to the Comprehensive Plan, other City regulatory documents have numerous references and requirements for water resources protection and enhancement.

BUDGETING BY PRIORITIES

The City of Redmond budget is developed through a process where community priorities were determined based on extensive public input.

The priorities are:

- I want a diverse and vibrant range of businesses and services in Redmond.
- I want to live, learn, work and play in a **clean and green environment.**
- I want a sense of community and connection with others.
- I want a well maintained city whose transportation and other **infrastructure** keeps pace with growth.
- I want to be safe where I live, work and play.
- I want city government that is responsible and responsive to its residents and businesses.

Water resources efforts are predominantly covered under the clean and green priority and the infrastructure priority. (Refer to Budgeting by Priorities information)

This City guidance provides the foundation for the development of the Water Resources Strategic Plan vision, goals, objectives, strategies and tactics.

PUBLIC WORKS DEPARTMENTAL GUIDANCE

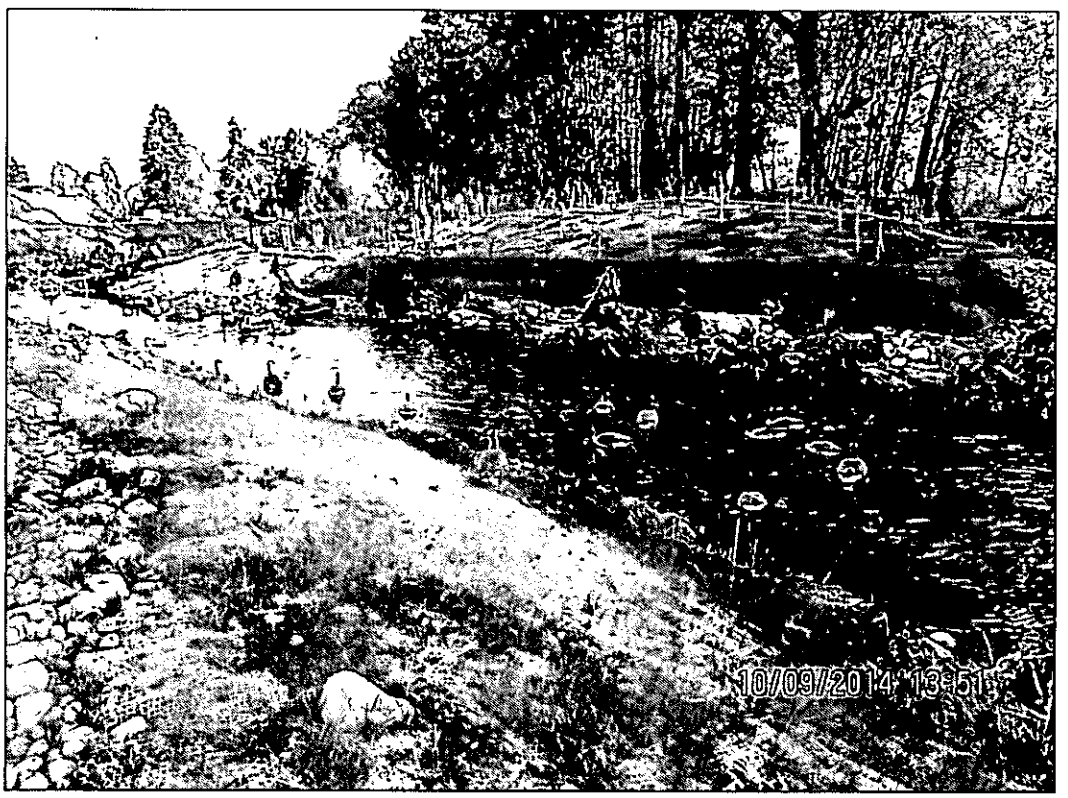
The Public Works Department is currently in the process of developing a new strategic plan. A draft is currently scheduled for Council study session review in early 2015. Approaches from this water resources plan have informed the development of the Public Works Plan and in turn the Public Works plan will influence the approaches in this plan. We will look to refine the alignment of these plans through future plan updates.

Public Works Vision

Our community's quality of life is protected and enhanced by our delivery of exceptional Public Works service

Public Works Mission

We strategically build, operate and maintain public infrastructure and provide environmental stewardship for our dynamic community.



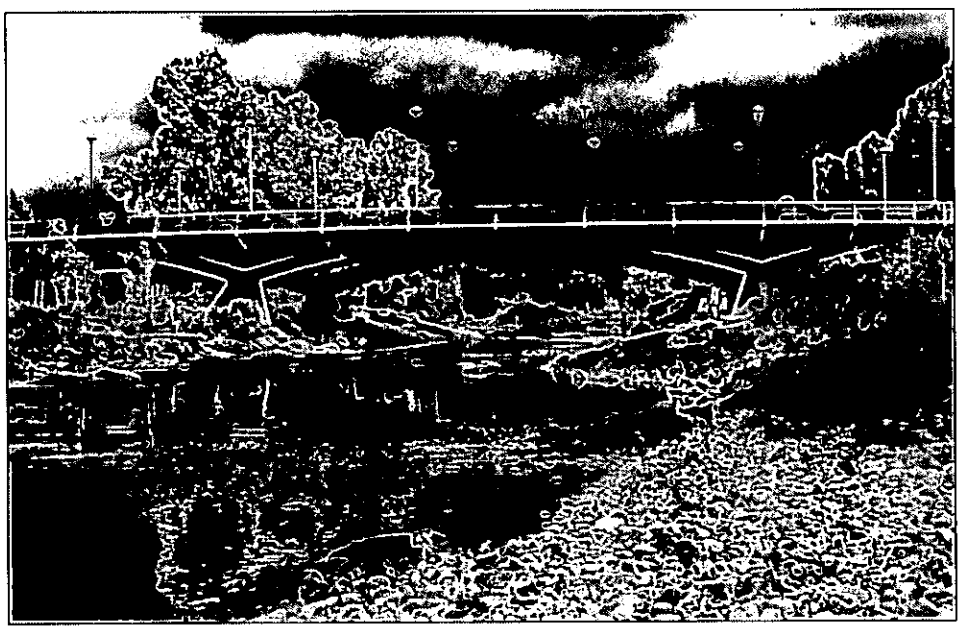
WATER RESOURCES VISION & PRINCIPLES

Vision

The vision is the inspiring words chosen to clearly and concisely convey the direction of the organization. It is a long-term view and concentrates on the future. The vision statement communicates both the purpose and values of the organization. For employees, it gives direction about how they are expected to behave and inspires them to give their best. Shared with customers, it shapes customers' understanding of why they should work with the organization.

Water resources that support our vibrant urban community while providing a lasting natural legacy.

Water resources are managed so that: people are safe, buildings and property are protected from flooding and erosion, urban functions continue, stream areas are stable and healthy for fish and wildlife, surface and groundwater are safe and abundant, salmon are recovering, and our local streams, rivers, lakes and Puget Sound provide a lasting natural legacy for Redmond and the region.



Water Resources Guiding Principles

Guiding principles are positive leading statements that are the foundation for the conduct of behavior, both individually and in relationships with others. They are the beliefs that most staff would agree with because they are viewed as organizationally appropriate and inherently valuable. Guiding principles are qualities that define and differentiate us and are naturally viewed as leading to higher level functioning, creating positive relationships with others, and promoting the City. These principles are not prioritized—all are to be considered equally.

1. **Understand existing conditions and risks**

   Natural systems are complex and constantly changing. Additionally, many varied activities and conditions within a growing vibrant community have the potential to impact these complex systems. Maintaining a solid level of understanding of these systems and risks will help maximize the effectiveness of our actions.

2. **Use a watershed (drainage area) approach for plans and projects**

   In the water resources field, adverse conditions at a point are almost always the result of conditions contributing to that point. Whether it is flooding and erosion in a stream or pollution detected in the ground, these conditions are the result of multiple issues that are all contributing to that point. Taking a watershed approach provides a more holistic view that allows us to identify problem causes, not just effects so that more effective actions can be taken.

3. **Remain nimble – make the most of opportunities**

   Numerous actions are occurring every day in the City that could impact the City's water resources. Partnering with private development activities, capital construction projects in other city areas, regional activities, actions by other government agencies, citizen group and/or non-profits may multiply our effectiveness if we are positioned to take advantage of these opportunities.

4. **Innovate and adapt**

   Technology related to water resources is constantly evolving. We need to stay current. The solutions we are using today are different than those used even 5 years ago. We need to move forward even when there is uncertainty but recognize that adjustments may need to be made. We should build in flexibility in our projects, where feasible, to allow us to take advantage of technological advances.

5. **Address the source of the problem**

Addressing the source of problems is better for the environment and more cost effective than dealing with the resulting conditions. Focus should be on preventing pollution rather than cleaning it up and preventing excess runoff rather than addressing flooding and repairing erosion. If the source of the problem cannot be remedied, address the issue as close to the source as possible.

6. **Foster community stewardship**

The water resources we are protecting are assets for the community and the community should play a role in preserving these assets. Engaging the community as stewards of the water resources and making it easy to participate can prevent adverse impacts and can greatly multiply the effectiveness of City actions.

7. **Influence and advance regional efforts**

Redmond's water resources are impacted by actions outside our City, just as our actions impact the water resources of the region. We need to work regionally to engage others to limit their impact on Redmond. Additionally, we need to support the water resource goals of the region—like recovering salmon and Puget Sound—since these play a role in the quality of life for all of us.

8. **Strive to meet the intent of regulatory requirements through partnerships**

Redmond, like all cities in the region, is required to meet water resources regulations from numerous agencies including the Department of Ecology, Department of Health, Department of Fish and Wildlife, Corps of Engineers, National Marine Fisheries Service, and others. Most of these regulations focus on what to do, which is very narrow and limiting compared to the intent of the regulation, which allows for more creativity and opportunity. Agencies struggle with creative approaches over just meeting the letter of the regulation. However, with the right partnership and demonstrated results, Redmond can build the necessary credibility with agencies that will allow us to successfully enact more creative solutions that result in better outcomes for Redmond and the region.

9. **Seek the best balance of environmental conditions and other City goals**

Redmond is in the urban growth area and plans to, and expects to, accommodate additional development. At the same time, environmental conditions that can be adversely impacted by development are a major factor in Redmond's high quality of life. The key is to strive for the best balance of growth and environment.

10. Encourage voluntary compliance prior to enforcement actions

Compliance with water resources protection regulations is vital to the preservation of these community resources. We need to work with businesses, citizens, contractors, etc. in the community with a focus on gaining voluntary compliance. However, if reasonable efforts to gain voluntary compliance are not successful enforcement may be necessary to preserve these resources to maintain Redmond's quality of life now and into the future.

WATER RESOURCES - GOALS, OBJECTIVES, STRATEGIES AND TACTICS

Goals

Goals describe what the program/project is striving to accomplish; they depict the general programmatic outcomes desired.

I. Sustain the groundwater resource as a safe, cost effective and abundant supply for drinking water and stream base flows
II. Manage stormwater runoff to protect people, property and the environment
III. Ensure the quality of surface waters and associated buffers support thriving salmon and wildlife populations, and provide recreational opportunities and beautiful natural areas

Objectives

Objectives provide additional clarity and insight into the intent of our goals. This supports the development of strategies and tactics that will help us ultimately achieve our vision.

Objective 1 – Protect the quality of surface waters and groundwater

- Groundwater quality is not degraded and meets drinking water standards with existing treatment processes
- Developed areas and urban activities produce little pollution
- River, creeks, streams and lake conditions support healthy fish and wildlife

Objective 2 – Maintain adequate quantity of surface waters and groundwater

- Groundwater levels do not decline and remain high enough to supply drinking water wells
- Flow conditions support fish (not too much in winter and not too little in summer)

Objective 3 – Manage stormwater to prevent flooding and erosion

- Drainage system collects and conveys water to minimize impact to streets and other developed areas
- Stable channels carry necessary flows while providing habitat features for full life cycles of fish and wildlife

Objective 4 – Restore stream habitat

- Stable channels provide habitat features for full life cycles of fish and wildlife
- Streams are accessible to fish and riparian wildlife
- Stream buffers are canopied and have predominantly native vegetation
- Critical areas are protected and provide the maximum practical habitat value

Strategies and Tactics

Strategies and tactics are the method or plan chosen to bring about a desired future, such as achievement of a goal, objective or solution to a problem.

Strategy 1 – Reduce the risk of surface water, groundwater, and stormwater contamination

1.1 Tactic Maintain an inventory of hazardous materials used and/or stored over our drinking water aquifer

1.2 Tactic Inspect sites to determine how hazardous materials are stored and used. Use inspection as an opportunity to educate property owners/operators about the reducing risks from contamination

1.3 Tactic Encourage businesses and the public to reduce the use and storage of hazardous material and to use the least hazardous approach

1.4 Tactic Encourage businesses to use best management practices for activities and storage (such as secondary containment, covered storage, parking lot sweeping, etc.) in accordance with regulations

1.5 Tactic Have businesses with large quantities of hazardous materials develop plans for handling the materials in a manner that protects groundwater and surface water

1.6 Tactic Evaluate the risks to groundwater from stormwater infiltration systems, upgrade city systems and partner with businesses to reduce risk

1.7 Tactic Review and inspect capital construction and private development projects to ensure that project goals are met while protecting water resources

1.8 Tactic Develop and maintain policies that address threats to groundwater quality and quantity

1.9 Tactic 9.1

<u>Strategy 2</u> – Monitor surface water, groundwater, and stormwater conditions

2.1 Tactic Continue to monitor the groundwater to identify presence and sources of contamination and changes in quantity and quality conditions early to foster cost effective actions/cleanup and to prevent impacts to City supply wells

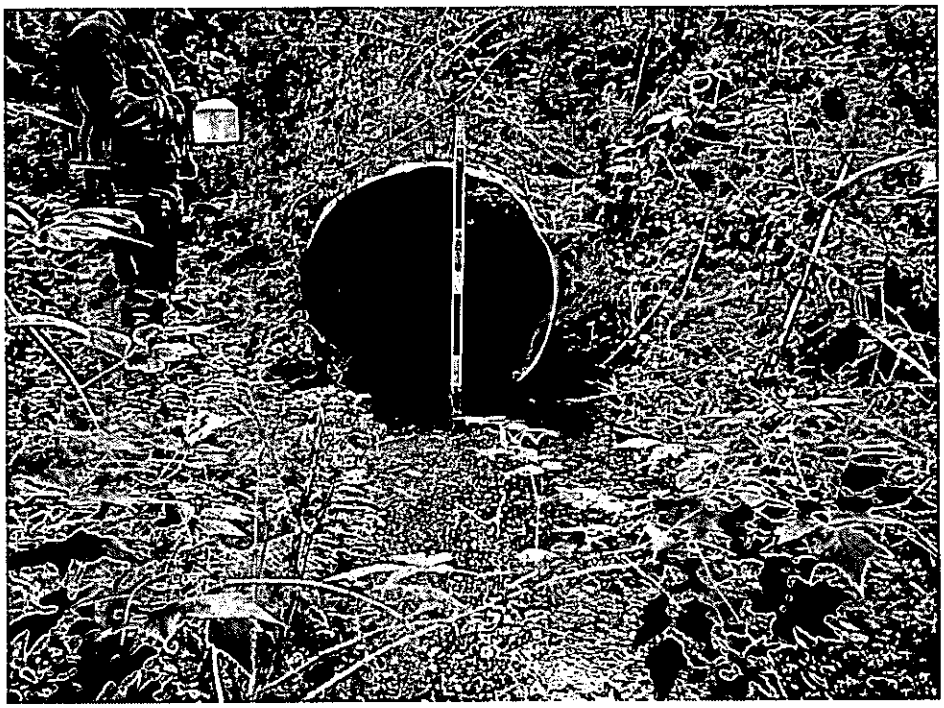
2.2 Tactic Reevaluate and refine comprehensive groundwater monitoring plan and well network to evaluate conditions between known and potential sources of contamination and City supply wells

2.3 Tactic Continue to monitor surface water conditions and trends for biological conditions, water quality, seasonal surface water conditions, flow conditions and stream and buffer habitat conditions to provide a strong data foundation for decision making

2.4 Tactic Refine stormwater system monitoring to identify sources of contamination to better inform prevention efforts

2.5 Tactic Monitor effectiveness of actions/projects and adapt to continually improve results

2.6 Tactic Monitor and inspect stormwater infrastructure systems to ensure that they are functioning as designed/intended



<u>Strategy 3</u> – Manage existing contamination

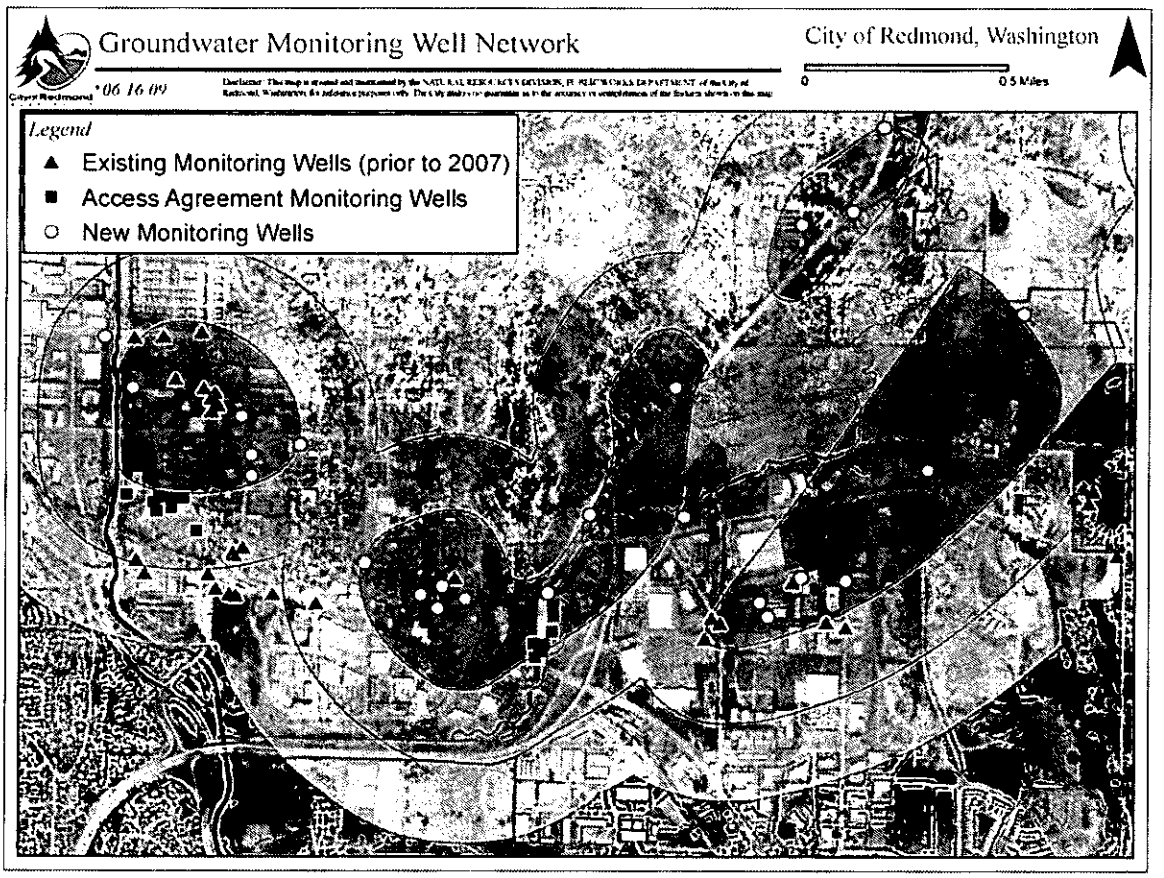
3.1 Tactic Look for opportunities to get contamination cleaned up

3.2 Tactic Encourage the state to take the lead on groundwater and soil cleanups and continue to coordinate/monitor ongoing clean-up efforts

3.3 Tactic Pursue the cleanup of sites by responsible party

3.4 Tactic Manage and/or cleanup high risk sites if other options are not viable; level of action should be based on potential impact to the City and public benefit

3.5 Tactic Continue to monitor low risk contamination to ensure that conditions are not changing until clean-up opportunities are viable



<u>Strategy 4</u> – Protect and restore aquifer recharge (increase infiltration)

4.1 Tactic Use infiltration as the preferred method of stormwater management for private development projects and capital construction

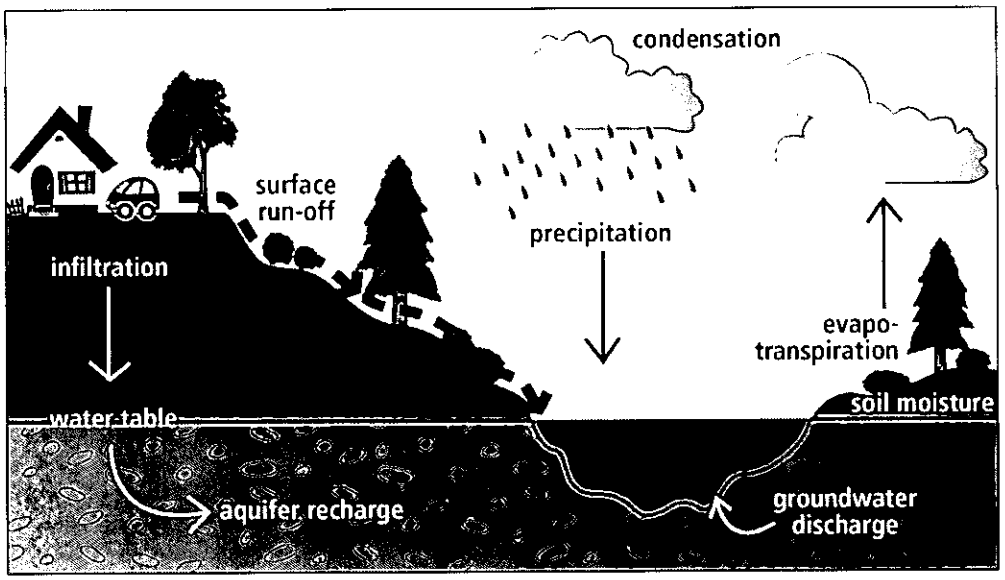
4.2 Tactic Look for opportunities to minimize the creation of impervious area while meeting planned density targets

4.3 Tactic Look for opportunities to retrofit previously developed areas to infiltrate where feasible to compensate for historical losses of recharge

4.4 Tactic Coordinate with King County to maintain/increase recharge in areas that contribute groundwater to Redmond but are outside City limits

4.5 Tactic Do not permit permanent dewatering. Minimize temporary dewatering should plan for and mitigate potential adverse impacts

4.6 Tactic Maintain existing recharge areas and support low impact development approaches



<u>Strategy 5</u> – Proactively maintain water resources infrastructure (pipes, catch basins, vaults, ponds, swales, monitoring wells, etc.)

5.1 Tactic Maintain a complete and accurate inventory and condition assessment of water resources infrastructure

5.2 Tactic Minimize the amount of road debris, sediment and leaves impacting/entering the system through street sweeping, leaf pickup, etc.

5.3 Tactic Remove debris from the system to protect water quality and prevent flooding

5.4 Tactic Repair infrastructure to maintain function and optimize the useful life

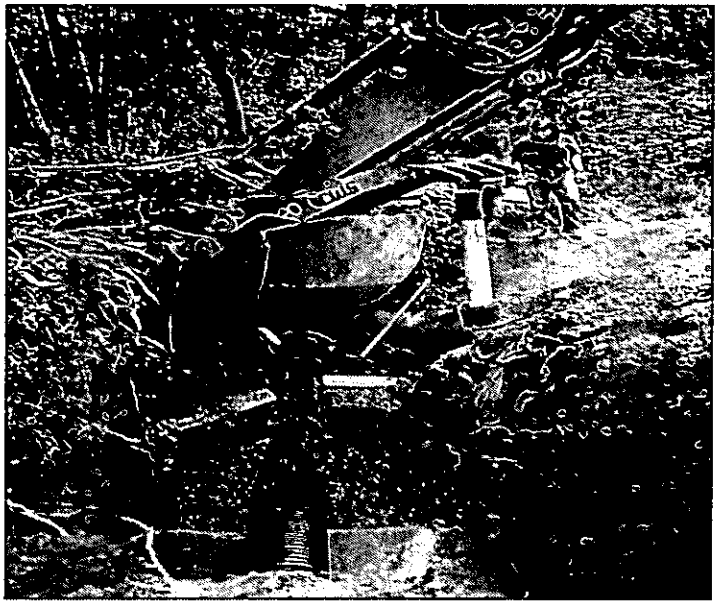
5.5 Tactic Plan and design infrastructure to allow for cost effective maintenance

5.6 Tactic Develop a program to identify needed system replacement

5.7 Tactic Maintain aesthetics, landscaping and habitat associated with water resources infrastructure

5.8 Tactic Ensure that private systems are maintained to function as designed

5.9 Tactic Consider maintenance staffing and equipment needs from capital construction and private development projects



<u>Strategy 6</u> – Manage flooding and adverse impact to floodplains

6.1 Tactic Identify frequently flooded areas and manage to protect the public

6.2 Tactic Coordinate with FEMA on floodplain issues (flood insurance, community rating system, floodplain updates, elevation certificates, compensatory flood storage, etc.)

6.3 Tactic Maintain and restore flood storage capacity, floodplain habitat, and floodplain connections to surface waters

6.4 Tactic Provide drainage system conveyance capacity for at least the 10 year storm (25 year for culverts) and provide safe drainage system overflow paths in the event the drainage system is overwhelmed or fails

6.5 Tactic Develop citywide tree canopy goals and strategies that help to minimize impervious surfaces

<u>Strategy 7</u> – Plan for future development and retrofit developed areas that flood or have degraded water quality and/or habitat

7.1 Tactic Continue to implement regional facilities for stormwater management in urban centers and southeast Redmond and consider it for other areas

7.2 Tactic Time construction of regional stormwater facilities to provide capacity ahead of private development and capital project needs

7.3 Tactic Coordinate stormwater infrastructure with other City efforts (such as parks and transportation) to achieve efficient and mutually beneficial facilities and to retrofit existing streets

7.4 Tactic Develop basin plans that address system deficiencies, plan for growth, improve water quality, and restore salmon habitat

7.5 Tactic Prioritize development of basin plans in areas with highest recovery potential over areas that are more degraded

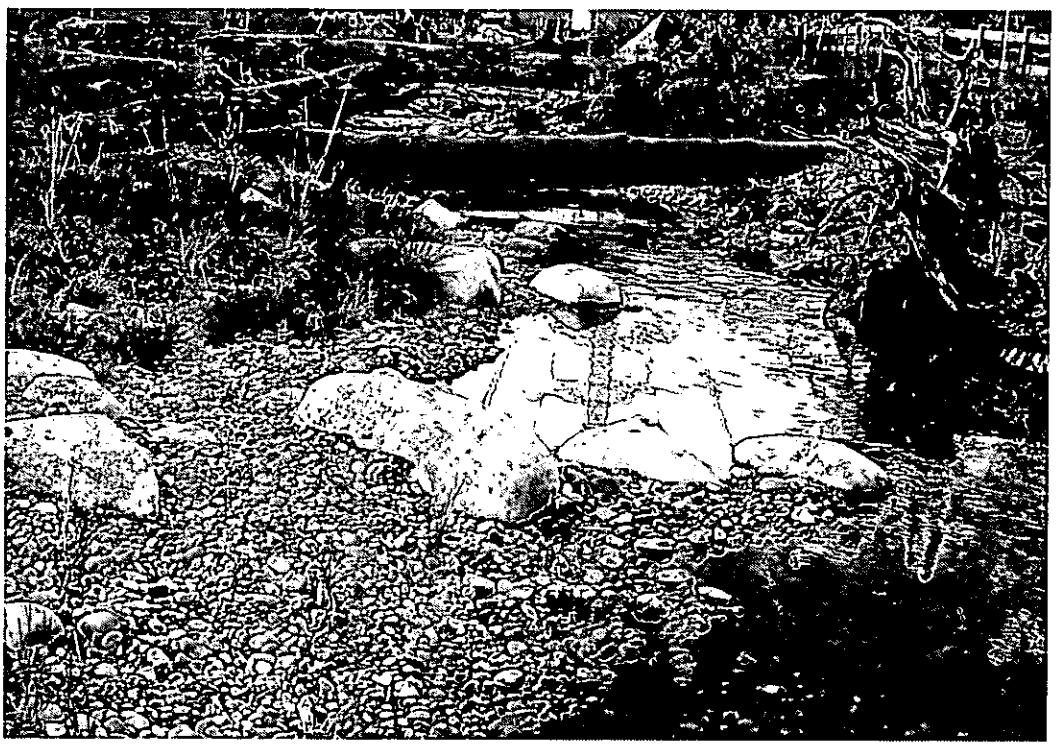
7.6 Tactic Retrofit water quality first through minimizing loading then installing treatment systems to remove pollutants

7.7 Tactic Contribute to long range planning efforts such as neighborhood planning and innovative development approaches to identify water resources issues early and suggest potential remedies

7.8 Tactic Develop Low Impact Development (LID) approach for Redmond to support desired stormwater management strategies and to comply with our NPDES permit. Align City approach with the state refining science and guidance

7.9 Tactic Prioritize water resources capital projects that have multiple benefits and coordinate timing through the citywide capital investment strategy

<u>Strategy 8</u> – Protect and restore stream corridors, buffers, wetlands, and riparian habitat



8.1 Tactic Use a watershed approach for habitat restoration planning and activities

8.2 Tactic Take the lead and seek regional support on habitat restoration efforts of Class 1 waters (Sammamish River, Bear Creek and Evans Creek) within the City limits and support habitat restoration and water quality improvement efforts for Lake Sammamish lead by others

8.3 Tactic Consider addressing causes of degradation such as excessive flows prior to conducting direct habitat restoration

8.4 Tactic Remove barriers to fish migration and prevent the creation of new barriers, prioritize removal in areas based on upstream habitat conditions and value

8.5 Tactic Encourage private development to address restoration issues onsite and explore options for enhanced requirements

8.6 Tactic Enhance the long-term protection of riparian habitat through land use protections (i.e., Native Growth Protection Easements), community education and outreach, and encouraging stewardship

8.7 Tactic Provide maintenance of habitat restoration areas to ensure long-term success

8.8 Tactic Focus mitigation efforts onsite where feasible.However, where on-site mitigation is unlikely to be successful, look for creative opportunities to restore and maintain habitat through offsite mitigation and partnerships, such as mitigation banking

8.9 Tactic Actively plant buffers and address invasive species

<u>Strategy 9</u> – Involve the public in water resources protection and recovery

9.1 Tactic Include the public in major planning efforts related to water resources

9.2 Tactic Coordinate water resources outreach with other City communication efforts

9.3 Tactic Encourage the public to be stewards of water resources through daily actions and volunteer efforts

9.4 Tactic Educate children on water resources issues to help influence actions of adults and to set a path for long-term support of water resources protection

9.5 Tactic Engage the public and city staff on water resources issues strategies through capital projects, private development and other City program activities

9.6 Tactic Respond to public drainage concerns promptly and use actions as opportunity to educate and engage the public on water resources issues

9.7 Tactic Increase awareness and ease of reporting water resource concerns, such as the spill hotline

9.8 Tactic Support and coordinate with regional water resources outreach efforts

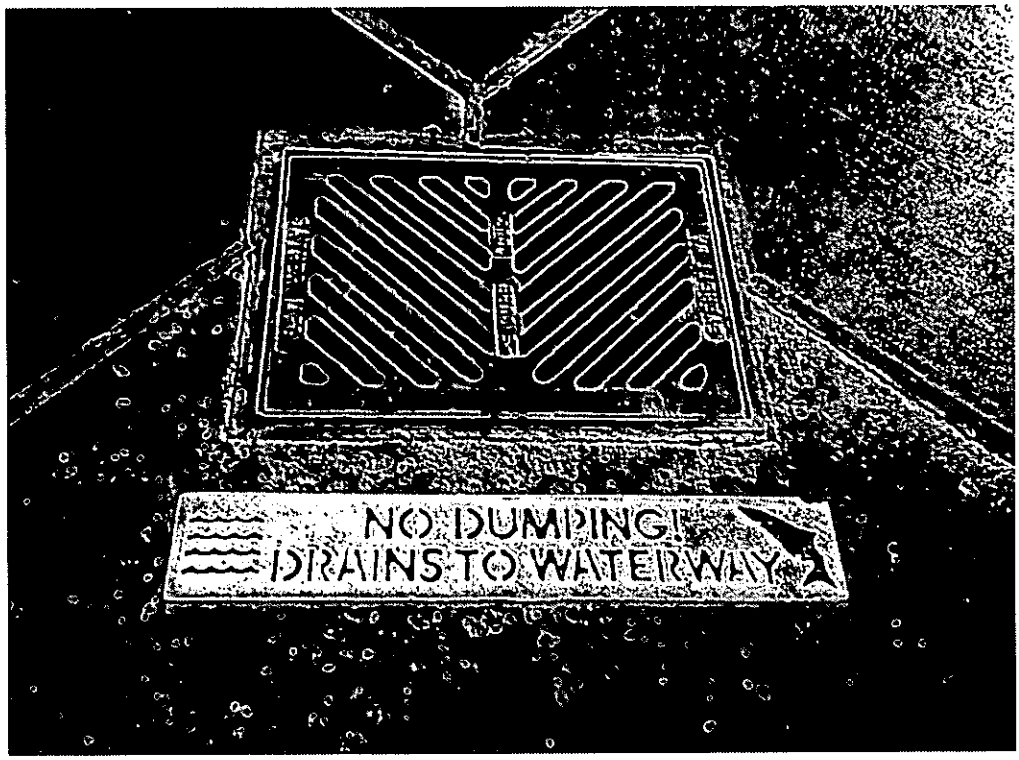
<u>Strategy 10</u> – Fund water resources protection through utility rates, connection charges, development fees and grants

10.1 Tactic Use utility rate structures to encourage preferred methods of water resources protection

10.2 Tactic Ensure that maintenance funding and staffing keeps pace with system expansion and changing requirements

10.3 Tactic Update funding strategy to plan for and fund system repairs, replacement and expansion

10.4 Tactic Position the City well to take advantage of grant opportunities and seek grant funding to leverage City funds



Key Actions for the years 2015 – 2017

The 3-Year Action Plan outlines major planning, programmatic and project actions in support of the strategic plan. The lists below provide guidance on strategic actions that can be taken in support of plan goals and objectives. Many of the actions are budgeted and some have already been initiated. Other actions will be included in future budget offers for City Council to consider.

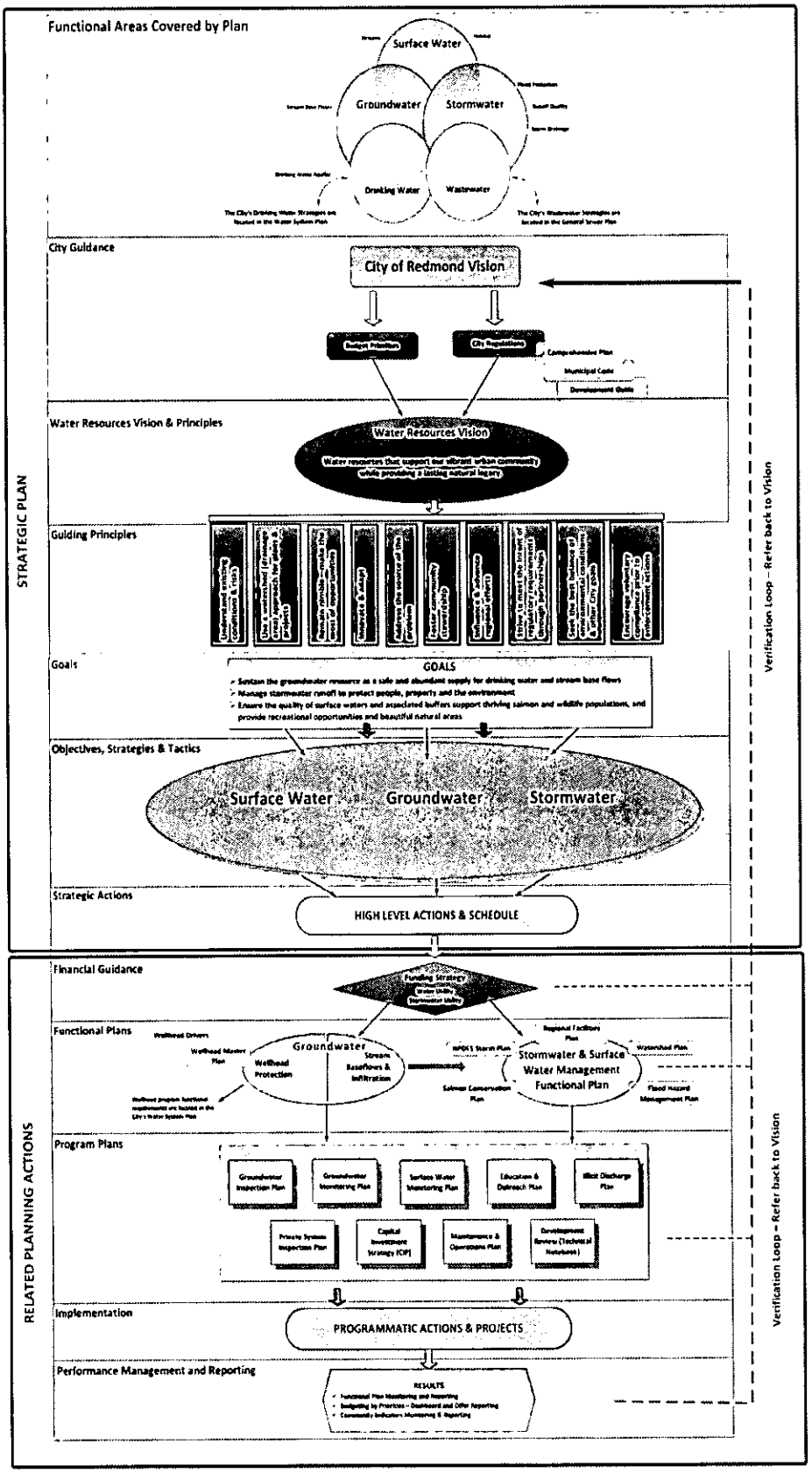
Major Planning Actions	**Tactic**	2014	**2015**	**2016**	**2017**	2018
Wellhead Protection Master Plan - development	Numerous	**x**	**x**	**x**		
Wellhead Inspection Program Plan - update	1.2		**x**			
Low Impact Development (LID) Plan – development	7.8	**x**	**x**	**x**		
Stormwater and Surface Water Functional Plan – development	5.1 & Strategy 7	**x**	**x**	**x**		
Overlake Village stormwater plan refinement	7		**x**			
Sub-area plans - Marymoor and RoseHill	7.3		**x**	**x**		
Watershed Plan - implementation	Numerous	**x**	**x**	**x**	**x**	**x**
Dewatering Policy	1.8, 4.5	**x**	**x**	**x**	**x**	**x**

Major Programmatic Actions	**Tactic**	2014	**2015**	**2016**	**2017**	2018
Evaluate culvert safety and capacity	6.5	**x**	**x**	**x**		
Stormwater management effectiveness monitoring study – 6 streams	7.4 – 7.6	**x**	**x**	**x**		
Three dimensional model of aquifer	1.2, 1.8, 2.1, 2.2	**x**	**x**	**x**	**x**	
Support development of asset management system	5.1	**x**	**x**	**x**	**x**	
Stormwater infiltration retrofits (higher risk sites)	1.6	**x**	**x**	**x**	**x**	**x**
Drainage system inventory and condition assessment	5.1		**x**	**x**	**x**	**x**
Update stormwater billing credit system	10		**x**	**x**		

Major Capital Projects	**Tactics Supported**	2014	**2015**	**2016**	**2017**	2018
Construct Redmond Way Regional Facility	7.1,2,3, 9.1,9.2, 10.4	**x**	**x**			
Construct Overlake detention vault (behind Sears)	7.1,2,3, 9.1,9.2, 10.4	**x**	**x**			
Bear Creek rehabilitation	8.2 & 8.6-8.9, 9.5, 10.4	**x**	**x**			
Tosh Creek basin retrofit projects	4.3, 8.4, 8.6,8.9,9.3, 10.4		**x**	**x**	**x**	**x**
Evans Creek relocation	8.2 & 8.6-8.9, 9.5, 10.4	**x**	**x**	**x**	**x**	**x**
Overlake Village station infiltration vault	7.1, 7.7	**x**	**x**	**x**	**x**	
Monticello Creek Basin Restoration Plan	5.1, 6, 7, 8	**x**	**x**	**x**		

Appendix 1 Water Resources Strategic Plan and Related Planning Actions – Diagram

WATER RESOURCES STRATEGIC PLAN AND RELATED PLANNING ACTIONS



Appendix 2 Measuring Performance

Evaluating performance of this plan will focus on the water resources conditions that result from implementing plan actions. The City has worked on developing performance measures over the past several years through work on budget, logic models, the Public Works Strategic Plan, Planning Community Indicators, and the Council's dashboard measures. The Natural Resources Division began annual reporting in 2011on a series of measures (Core Services measures) ranging from the program management level to Council dashboard level. Some of the Core Services measures are well-established, and others are being refined to simplify data collection, better reflect outcomes, or are being changed to something more meaningful. As the City refines its overall system for measuring performance, we will be looking to determine the correct mix and level of measures appropriate for strategic plan reporting.

The Core Services measures, as well as more recently developed measures from the 15/16 budget process, are shown as examples in the table below. The long term goals are based on restoration of water resources within 100 years, or per the City's Watershed Management Plan, State regulations or guidance. In some cases, these targets have been at least conceptually analyzed to determine funding needs, whereas for others, additional information is needed to determine funding needs. We continue to work towards incorporating this information into our financial and budgeting planning efforts. The measures in the following table are broken into four categories:

- Surface Water and Habitat Protection/Enhancement
- Stormwater Management
- Groundwater Protection
- Plan Administration

Water Resources Strategic Plan – Example Performance Measure Summary			
Focus	**Measure**	**2013 Year-End Status/Trend**	**Long-Term Goal**
Surface Water and Habitat Protection/Enhancement			
Surface Water Quality	Average Water Quality Index score	62 – no trend determined	80 - indicating water quality is of "low concern"
Surface Water Biology	Average Benthic Index of Biologic Integrity (BIBI) score**	19 - steady	36 - indicating supportive of self-sustaining salmonid populations
	Percentage of Class II streams considered healthy*	0% - steady	100% - indicating all Class II streams have BIBI scores above 35 by 2110
Stream Buffer Canopy Coverage	Percentage of regulatory stream buffer area covered by tree canopy	52% - no trend determined	All Redmond stream buffers have 90% or more canopy cover.
	Acres of riparian buffer planted/year	14 acres – positive trend	5 acres/year to meet above goal of 90% coverage in 100 years - 2110
Stream Accessibility	Percentage of Class II stream length fully accessible by fish	29% - positive trend	100% of Class 2 stream length open to unimpeded migration of salmonids
	Number of Class II stream fish barriers removed/year	9 – positive trend	1 barrier/year to open all stream length in 100 years- 2110
In-Stream Habitat Complexity	Percentage of stream length with "good" in-stream habitat**	21.9% - no trend determined	100% stream length at "good" habitat level
	Length of stream increased to at least "good" complexity/year	1470 ft. – steady	1000 ft/year (1400 ft./year is needed to reach the goal of 100% "good" in 100 years - 2110)

Stormwater Management			
Runoff Flow Control	Percent of City with adequate stormwater flow control**	17.9% - steady	100% of area needing flow control has adequate levels that protect receiving waters to protect fish and other uses
Stormwater System Capacity	Number of times a street travel lane is closed due to flooding**	New Measure (2015)	0
	Percent of the pipe network having adequate capacity	99.5% - steady	100%
	Percent of culverts with adequate capacity	91% - most culverts not yet analyzed	100%
Runoff Treatment	Percent of City with adequate stormwater water quality treatment	33% - steady	100% of area needing treatment has adequate levels that protect receiving waters to protect fish and other uses
Groundwater Protection			
Groundwater Recharge	Change in recharge area	-5.89 acres; trend is decreasing (loss)	Measure and targets need to be redefined
Site Inspection	Site compliance rate at re-inspection	57%; no trend determined	80%
	Percentage of high-risk sites visited **	New measure (2015)	100%
Groundwater Quality	Percentage of monitoring wells meeting water quality standards**	New measure (2015)	To be determined
	Percentage of groundwater samples with adverse changes in condition**	New measure (2015)	0%

Plan Administration			
Plan Completion	Workplan Completion	92.6% operational/95% capital projects	90% operational/80% CIP projects
	Percentage of stormwater planning documents that are complete and current **	New measure (2015)	100%

* indicates a City Dashboard measure

** indicates measures in the 2015/2016 logic models for stormwater engineering & surface and groundwater protection offers